

SUPPLEMENTAL AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Serial Number: 10/027,914

Filing Date: December 21, 2001

Title: SYSTEMS, METHODS, AND SOFTWARE FOR CLASSIFYING TEXT FROM JUDICIAL OPINIONS AND OTHER DOCUMENTS

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**IN THE CLAIMS**

Please amend the claims as follows:

1. (Currently Amended) [[A]] An automated method of classifying input text to a target classification system having two or more target classes, the method comprising:  
for each target class:
  - providing at least first and second class-specific weights and a class-specific decision threshold;
  - using at least first and second classification methods to determine respective first and second scores based on the input text and the target class;
  - determining a composite score based on the first score scaled by the first class-specific weight for the target class and the second score scaled by the second class-specific weight for the target class; and
  - classifying or recommending classification of the input text to the target class based on the composite score and the class-specific decision threshold.
2. (Original) The method of claim 1, wherein at least one of the first and second scores is based on a set of one or more noun-words pairs associated with the input text and a set of one or more noun-word pairs associated with the target class, with at least one noun-word pair in each set including a noun and a non-adjacent word.
3. (Original) The method of claim 1, wherein providing each first and second class-specific weight and class-specific decision threshold comprises searching for a combination of first and second class-specific weights and class-specific decision threshold that yield a predetermined level of precision at a predetermined level of recall based on text classified to the target classification system.

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4. (Original) The method of claim 1, wherein a non-target classification system includes two or more non-target classes, and at least one of the first and second scores is based on one or more of the non-target classes that are associated with the input text and one or more of the non-target classes that are associated with the target class.

5. (Original) The method of claim 4:

- wherein the input text is a headnote for a legal document; and
- wherein the target classification system and the non-target classification system are legal classification systems.

6. (Original) The method of claim 1, wherein the target classification system includes over 1000 target classes.

7. (Original) The method of claim 1, further comprising:

- displaying a graphical user interface including first and second regions, with the first region displaying or identifying at least a portion of the input text and the second region displaying information regarding the target classification system and at least one target class for which the input text was recommended for classification; and
- displaying a selectable feature on the graphical user interface, wherein selecting the feature initiates classification of the input text to the one target class.

8. (Currently Amended) A machine-readable medium comprising instructions for ~~implementing the method of claim 1.~~ performing an automated method of classifying input text to a target classification system having two or more target classes, the medium including instructions that for each target class can cause:

- providing at least first and second class-specific weights and a class-specific decision threshold;
- using at least first and second classification methods to determine respective first and second scores based on the input text and the target class;

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- determining a composite score based on the first score scaled by the first class-specific weight for the target class and the second score scaled by the second class-specific weight for the target class; and
- classifying or recommending classification of the input text to the target class based on the composite score and the class-specific decision threshold.

9. (Currently Amended) [[A]] An automated method of classifying input text to a target classification system having two or more target classes, the method comprising:  
for each target class:

- determining first and second scores based on the input text and the target class and respective first and second classification methods;
- determining a composite score based on the first score scaled by a first class-specific weight for the target class and the second score scaled by a second class-specific weight for the target class; and
- determining whether to identify the input text for classification to the target class based on the composite score and a class-specific decision threshold for the target class.

10. (Original) The method of claim 9, wherein at least one of the first and second scores is based on a set of one or more noun-words pairs associated with the input text and a set of one or more noun-word pairs associated with the target class, with at least one noun-word pair in each set including a noun and a non-adjacent word.

11. (Original) The method of claim 9, wherein determining the first and second scores comprises determining any two of:

- a score based on similarity of at least one or more portions of the input text to text associated with the target class;
- a score based on similarity of a set of one or more non-target classes associated with the input text and a set of one or more non-target classes associated with the target class;
- a score based on probability of the target class given a set of one or more non-target classes associated with the input text; and

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- a score based on probability of the target class given at least a portion of the input text.
12. (Original) The method of claim 11, wherein each target class is a document and the text associated with the target class comprises text of the document or text of another document associated with the target class.
13. (Original) The method of claim 9:
- wherein determining the first and second scores for each target class comprises:
    - determining the first score based on similarity of at least one or more portions of the input text to text associated with the target class; and
    - determining the second score based on similarity of a set of one or more non-target classes associated with the input text and a set of one or more non-target classes associated with the target class;
  - wherein the method further comprises determining for each target class:
    - a third score based on probability of the target class given a set of one or more non-target classes associated with the input text; and
    - a fourth score based on probability of the target class given at least a portion of the input text; and
  - wherein the composite score is further based on the third score scaled by a third class-specific weight for the target class and the fourth score scaled by a fourth class-specific weight for the target class.
14. (Original) The method of claim 9:
- wherein the input text is associated with first meta-data and each target class is associated with second meta-data; and
  - wherein at least one of the first and second scores is based on the first meta-data and the second meta-data.

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15. (Original) The method of claim 14, wherein the first meta-data comprises a first set of non-target classes that are associated with the input text and the second meta-data comprises a second set of non-target classes that are associated with the target class.

16. (Currently Amended) A machine-readable medium comprising instructions for performing ~~the method of claim 9.~~ an automated method of classifying input text to a target classification system having two or more target classes, the medium including instructions for:

- determining for each target class first and second scores based on the input text and the target class and respective first and second classification methods;
- determining for each target class a composite score based on the first score scaled by a first class-specific weight for the target class and the second score scaled by a second class-specific weight for the target class; and
- determining for each target class whether to identify the input text for classification to the target class based on the composite score and a class-specific decision threshold for the target class.

17. (Currently Amended) A system for classifying input text to a target classification system having two or more target classes, the system comprising:

- means for determining for each of the target classes at least first and second scores based on the input text and the target class and respective first and second classification methods;
- means for determining for each of the target classes a corresponding composite score based on the first score scaled by a first class-specific weight for the target class and the second score scaled by a second class-specific weight for the target class; and
- means for determining for each of the target classes whether to classify or recommend classification of the input text to the target class based on the corresponding composite score and a class-specific decision threshold for the target class.

18-28. (Canceled)